

REMARKS

Please reconsider the application in view of the above amendments and the following remarks. Applicant thanks the Examiner for carefully considering this application.

I. Disposition of Claims

Claims 1-7, 9-12, 14-16, 18-24, and 26-29 are pending in this application. Claims 7, 9-12, 22-24, and 26-29 have been canceled by this reply. Of the still pending claims, claims 1 and 14 are independent. The remaining claims depend, directly or indirectly, from claims 1 and 14.

II. Amendments to the Claims

Claim 1 has been amended to comprise mixing an amount of a composition into a well fluid. The composition *consists essentially of* a viscosifying synthetic polymer and an effective amount of a miscible amine. Compositions consisting essentially of the synthetic polymer and miscible amine are disclosed in paragraphs [0021] – [0035]. The amendment to claim 1 does not constitute new matter.

Claim 14 has been amended to refer to a composition for a well fluid *consisting essentially of* a viscosifying synthetic polymer and an effective amount of a miscible amine. Claims 15, 16, and 18-21 have been amended to correspond with the amended claim 14. These amendments do not constitute new matter.

III. Rejection(s) under 35 U.S.C § 102

Present Invention

Disclosed embodiments of the present application are directed to a composition for a well fluid and methods of using that composition. As amended, the independent claims recite that the composition *consists essentially of* a miscible amine admixed with a viscosifying synthetic polymer in an amount effective to prevent substantial decomposition of the viscosifying synthetic polymer as the well fluid is used (*i.e.*, in use during drilling operations). The resultant increased thermal stability of the viscosifying synthetic polymer caused by the mixing of a miscible amine is discussed in paragraphs 44 - 47 of the originally filed specification.

Significantly, embodiments of the present application, unlike the prior art, do not involve cross-linking polymers, but instead are believed to operate by maintaining the pH of the system within an acceptable range. This requires adding a significant amount of amine, as opposed to prior art systems, wherein cross-linkants are required to stabilize the viscosity. The absence of cross-linkants reduces both cost and environmental impact, and represents a significant improvement over prior art systems. This limitation is found in the claims in the term “effective amount” of amine, as well as intended by the specified quantities of amine.

Quattrini

Claims 1-7, 9-12, 14-16, 18-24, and 26-29 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,660,287 (Quattrini). Claims 7, 9-12, 22-24, and 26-29 have been canceled by this reply. Thus, the rejection with respect to those claims is moot. Claims 1 and 14 have been amended to have compositions *consisting essentially of* a viscosifying synthetic polymer and an effective amount of a miscible amine. To the extent that this rejection may still apply to the amended claims, the rejection is

respectfully traversed.

Quattrini is silent on the use of any type of polymer in the well fluid. The Applicant respectfully notes that the Examiner has not indicated any mention of a polymer in the Quattrini reference. Thus, Quattrini does not prevent substantial decomposition of a polymer in a well fluid exposed to elevated temperatures.

In view of the above, Quattrini fails to show or suggest the present invention as recited in amended claims 1 and 14. Thus, claims 1 and 14 are patentable over Quattrini. Dependent claims 2-6, 15, 16, and 18-21 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Hanlon

Claims 1-7, 9, 10, 12, 14, 15, 18-23, and 26-29 were rejected as being anticipated by U.S. Patent No. 4,524,829 (Hanlon). Claims 7, 9, 10, 12, 22, 23, and 26-29 have been cancelled, rendering the rejection moot with respect to those claims. Further, claims 1 and 14 have been amended as discussed above. To the extent that this rejection may still apply to the amended claims, the rejection is respectfully traversed.

Claims 1 and 14 have been amended to recite a composition for a well fluid. The composition *consists essentially of* a viscosifying synthetic polymer and an effective amount of a miscible amine. The addition of the composition into a well fluid results in a thermally stable well fluid. Therefore, as amended, the method for using the composition in claim 1 and the composition in claim 14 are limited to a synthetic polymer and a miscible amine, along with materials that do not materially change the properties of the composition.

In contrast, Hanlon discloses using a composition that comprises a zirconium

additive used to crosslink with an amine, and an alpha-hydroxy acid. Hanlon, in column 6, goes into some detail as to why all of these chemicals are necessary to achieve the desired result. As Hanlon requires the presence of additional compounds that materially alter the nature of the composition, Hanlon cannot anticipate claim 17, as amended.

Furthermore, as noted above, Hanlon, like most prior art systems, functions by providing a crosslink (using the zirconium additive), as compared to the present system in which enough amine is required in order to provide a buffer for the solution. *See*, e.g. paragraphs 52 and 53 of the originally filed specification.

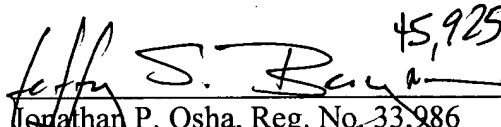
In view of the above, Hanlon fails to show or suggest the present invention as recited in amended claims 1 and 14. Thus, claims 1 and 14 are patentable over Hanlon. Dependent claims 2-6; 15, and 18-21 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

IV. Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 05542/009002).

Respectfully submitted,

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